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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,778	08/08/2001	Michael L. Boroson	83120RLO	4335

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EXAMINER

LAWRENCE JR, FRANK M

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 06/27/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/924,778

Applicant(s)

BOROSON ET AL.

Examiner

Frank M. Lawrence

Art Unit

1724

mk-10

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-24 is/are allowed.
- 6) ☒ Claim(s) 25, 26, 28-33 and 35 is/are rejected.
- 7) ☒ Claim(s) 27 and 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 May 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 6, 2003 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 25, 30 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Shtarkman (4,992,190).

4. Shtarkman ('190) teaches an ultrafine silica gel powder having an average particle size between about 0.1 microns and about 0.01 microns, and that such materials have found frequent use as desiccants (col. 3, lines 48-67). The desiccant is capable of maintaining a moisture absorption rate and providing a decreased humidity level of less than 100 ppm when the starting humidity level is near or less than 100 ppm.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 25, 26, 28-32 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belding et al. ('897) in view of Shtarkman ('190).
7. Belding et al. ('897) disclose a desiccant package comprising a desiccant paper made up of a desiccant, fibers, and a binder for retention of the desiccant on and within the fiber shafts in a paper matrix. The desiccant can include a zeolite, silica gel, or halogen salts having a particle size ranging from 0.1 to 50 microns. The fibers and binder form an adhesive for supporting the desiccant in a moisture-permeable container as defined by the instant specification, and will enhance the absorption rate by holding a higher level of desiccant. The fiber can be a cellulose acetate and the desiccant can comprise 5-70 wt. % of the article with the remainder being fibers and binder (see col. 4, lines 26-36; col. 5, lines 36-41; col. 7, lines 26-34; claim 17). The container is capable of being placed in a sealed enclosure as recited in the claims and the water vapor transmission rate of the binder and fibers will inherently be greater than the rate recited in the instant claims because a porous paper is formed. The desiccant is capable of maintaining a moisture absorption rate and providing a decreased humidity level of less than 100 ppm when the starting humidity level is near or less than 100 ppm. The instant claims differ from the disclosure of Belding et al. ('897) in that the average particle size of the desiccant is 0.001 to less than 0.1 microns.

8. Shtarkman ('190) discloses a silica gel desiccant as described in paragraph 4 above. It would have been obvious to one having ordinary skill in the art at the time of the invention to substitute the desiccant of Shtarkman for the desiccant in Belding et al. in order to provide a larger porous surface area per desiccant volume that can absorb large amounts of liquid or vapor.

9. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Belding et al. ('897) in view of Shtarkman ('190) as applied to claim 26 above, and further in view of Levinson et al. (5,384,357).

10. Belding et al. ('897) in view of Shtarkman ('190) disclose all of the limitations of the claims except that the binder is radiation curable. Levinson et al. ('357) disclose radiation curable silicone binders that can be used as a binder for a desiccant such as a zeolite (see abstract; col. 2, lines 49-56). It would have been obvious to one having ordinary skill in the art at the time of the invention to use a radiation curable binder in the desiccant structure of the prior art in order to provide a binder that allows accelerated manufacturing by speeding up the binding process.

Allowable Subject Matter

11. Claims 1-24 are allowed.

12. The following is an examiner's statement of reasons for allowance: Reasons for allowance of claims 1-24 are given in the office action of paper no. 5.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

13. Claims 27 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. The following is a statement of reasons for the indication of allowable subject matter: Reasons for allowability of claim 34 are given in the office action of paper no. 3. With respect to claim 27, the cited prior art fails to suggest a motivation for using any of the listed solid water absorbing particles having an average particle size of 0.001 to 0.1 microns that are capable of performing as recited in parent claim 25.

Response to Arguments

15. Applicant's arguments with respect to claims 25-32 and 35 have been considered but are moot in view of the new ground(s) of rejection. The newly found reference to Shtarkman ('190) is cited in the new rejections of claims 25, 26, 28-33 and 35. The previous rejections over Kyricos have been overcome and withdrawn.

Drawings

16. The corrected or substitute drawings were received on May 6, 2003. These drawings are approved.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional references listed on the attached PTO-892 form disclose silica gel and desiccant compositions.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank M. Lawrence whose telephone number is 703-305-0585. The examiner can normally be reached on Mon-Thurs 7:30-5:00; alternate Fridays 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 703-308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

Frank Lawrence



Primary Examiner 6-24-03

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June 24, 2003